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File: PGPB

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DOCUMENT-IDENTIFIER: US 20030059895 A1

TITLE: 125P5C8: a tissue specific protein highly expressed in various cancers

Detail Description Paragraph (378):

[0376] The 125P5C8 protein can function as a sodium symporter. In this case, 125P5C8 co-transport ions and/or proteins along with sodium. Several molecules have been identified to co-transport with Na⁺, the most common being iodide. The sodium/iodide co-transporter was shown to be over-expressed in breast cancer and to play a role in iodide uptake in thyroid cancer cells (Tazebay U et al. Nat. Med. 2000, 6:871; Filetti S et al. Eur. J. Endocrinol. 1999. 141: 443). In addition, the sodium/iodide symporter has been associated with radioiodine treatment modality in prostate and thyroid cancer (Spitzweg C et al. Cancer Res. 2000, 60:6526). In these studies 131j was (1) injected into tumor cells in vivo experiment or (2) used to bathe tumor cells in vitro. In either case, accumulation of .sup.131I induced tumor cell death. The function of 125P5C8 as a co-transporter of iodide and sodium is studied using FACS analysis techniques as well as labeled 131I. This study is critical in light of the importance of Na⁺/I⁻ transporter in therapy. When 125P5C8 is a sodium symporter, it is used as a target for diagnostic, preventative and therapeutic purposes.